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WHAT IS CLAIMED IS:

5 1. A system for providing public key infrastructure security
in a wide area computer network comprising:

a user terminal coupled to the computer network including
a client system;

a private key, and a public key assigned to a user when the
user registers with the system using the user terminal;

10 a database remote from the user terminal for securely
storing the private key and the public key;

15 a server system remote from the user terminal and coupled
to the computer network including a computer executable code for
performing a cryptographic function as a user transaction data on
behalf of the user.

20 2. The system of claim 1, further comprising a plurality of
security device transaction data stored in the database, wherein each
security device transaction data is related to a respective user.

25 3. The system of claim 1, wherein the private key is encrypted
when it is stored in the database.

30 4. The system of claim 2, wherein a respective security device
transaction data related to a user is loaded into the cryptographic
device when the user requests a service.

35 5. The system of claim 1, wherein the server system includes
a cryptographic device to authenticate the identity of the user and
verify that the identified user is authorized to assume a role and
perform a corresponding operation.

6. The system of claim 5, wherein the assumed role is a
security officer role to initiate a key management function.

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1 7. The system of claim 5, wherein the assumed role is an
administrator role to manage a user access control database.

5 8. The system of claim 5, wherein the assumed role is a
provider role to withdraw from a user account.

9. The system of claim 5, wherein the assumed role is a user
role to operate on a value bearing item.

10 10. The system of claim 5, wherein the assumed role is a
certificate authority role to allow a public key certificate to be
loaded and verified.

15 11. The system of claim 5, wherein the cryptographic device
includes a computer executable code for supporting multiple
concurrent users and maintaining a separation of roles and operations
performed by each user.

20 12. The system of claim 5, wherein the cryptographic device
stores information about a number of last transactions in a
respective internal register.

25 13. The system of claim 12, wherein the database stores a table
including the respective information about a last transaction, a
verification module to compare the information saved in the device
with the information saved in the database.

30 14. The system of claim 1, further comprising a digital
certificate stored in the database and assigned to a user when the
user registers with the system.

35 15. The system of claim 1, wherein the cryptographic function
is digitally signing a certificate.

1 16. The system of claim 1, wherein the cryptographic function
is encrypting data.

5 17. The system of claim 1, wherein the cryptographic function
is decrypting data.

10 18. The system of claim 1, wherein the database includes a user
profile for the user.

15 19. The system of claim 18, wherein the user profile includes
username, user role, password, logon failure count, logon failure
limit, logon time-out limit, account expiration, password expiration,
and password period.

20 20. The system of claim 5, wherein the cryptographic device is
capable of performing one or more of Rivest, Shamir and Adleman (RSA)
public key encryption, DES, Triple-DES, DSA signature, SHA-1, and
Pseudo-random number generation algorithms.

25 21. The system of claim 5, wherein the cryptographic device
stores information about a number of last transactions in an internal
register and compares the information saved in the register with the
information saved in a memory before loading a new transaction data.

30 22. A method for providing public key infrastructure security
in a wide area computer network comprising the steps of:

 assigning a private key and a public key certificate to a
user when the user registers with the system using a user terminal
coupled to the computer network;

 storing the private key and the public key in a database
remote from the user terminal; and

 performing a cryptographic function as a user transaction
data on behalf of the user utilizing the stored private key.

- 1 23. The method of claim 22, further comprising the step of
 storing a digital certificate and assigning the stored digital
 certificate to a user when the user registers with the system.
- 5 24. The method of claim 22, further comprising the step of
 storing a plurality of security device transaction data in the
 database, wherein each transaction data is related to one of a
 plurality of users.
- 10 25. The method of claim 24, further comprising the step of
 loading a security device transaction data related to a user into one
 of the one or more of cryptographic devices when the user requests to
 operate on a value bearing item.
- 15 26. The method of claim 25, further comprising the step of
 verifying that the requesting user is authorized to assume a role and
 to perform a corresponding operation.
- 20 27. The method of claim 26, wherein the assumed role is an
 administrator role to manage a user access control.
- 25 28. The method of claim 26, wherein the assumed role is a user
 role to perform expected IBIP postal meter operations.
- 30 29. The method of claim 26, wherein the assumed role is a
 certificate authority role to allow a public key certificate to be
 loaded and verified.
- 35 30. The method of claim 26, further comprising the steps of:
 supporting multiple concurrent operators and maintaining a separation
 of roles and operations performed by each operator.
- 35 31. The method of claim 22, further comprising the steps of:
 storing information about a number of last transactions in

1 a respective internal register of each of the one or more
cryptographic devices;

5 storing a table including the information about a last
transaction in the database;

 comparing the information saved in the respective device
with the respective information saved in the database; and

10 loading a new transaction data if the respective
information stored in the device compares with the respective
information stored in the database.

15 32. The method of claim 22, wherein the cryptographic function
is digitally signing a certificate.

15 33. The method of claim 22, wherein the cryptographic function
is encrypting data.

20 34. The method of claim 22, wherein the cryptographic function
is decrypting data.

20 35. The method of claim 22, further comprising the step of
storing a user profile for a plurality of users.

25 36. The method of claim 35, wherein the user profile includes
username, user role, password, logon failure count, logon failure
limit, logon time-out limit, account expiration, password expiration,
and password period

30 37. The method of claim 22, wherein the cryptographic function
is one or more of Rivest, Shamir and Adleman (RSA) public key
encryption, DES, Triple-DES, DSA signature, SHA-1, and Pseudo-random
number generation algorithms.